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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,709	12/12/2000	Magnus Par Jandel	34645-00521USPX	3245

7590 11/26/2004
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EXAMINER

KIBLER, VIRGINIA M

ART UNIT PAPER NUMBER

2623

DATE MAILED: 11/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,709

Applicant(s)

JANDEL ET AL.

Examiner

Virginia M Kibler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/22/04 has been entered.

Response to Amendment

2. The amendment received on 7/22/04 has been entered. Claims 19-33 remain pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 19, 21-23, 25, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al. ("Medical Image Compression with Lossless Regions of Interest") in view of Impagliazzo et al. (US 5,757,974).

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Regarding claims 19 and 25, Strom et al. ("Strom") discloses dividing the image into objects wherein the objects include ROI (Page 7, Sect. 2, para. 1; Page 15, Sect. 3.1); transforming while simultaneously compressing the image (Sect. 2.2); encoding individual segments of the objects independently according to assigned coefficients (Page 17, Sect. 3.2; Pages 9-10, Sect. 2.2). Strom does not appear to recognize encoding the separate segments as segment descriptors and encoding the segment descriptors into independently decodable subset descriptors. However, Impagliazzo et al. ("Impagliazzo") discloses encoding separate segments as segment descriptors and encoding the segment descriptors into independently decodable subset descriptors (Figure 4; Col. 6, lines 49-62; Col. 7, lines 33-67, Col. 8, lines 1-62). Strom and Impagliazzo are combinable because they are from the same field of endeavor of image compression. At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the encoding disclosed by Strom to include encoding the separate segments as segment descriptors and encoding the segment descriptors into independently decodable subset descriptors. The motivation for doing so would have been because it provides a simple and efficient method of identifying coefficients. Therefore, it would have been obvious to combine Strom and Impagliazzo to obtain the invention as specified in claims 19 and 25.

Regarding claims 21 and 27, Strom discloses storing the transformed and compressed image with associated shape descriptors (Page 8).

Regarding claims 22 and 28, Strom discloses responsive to a request for at least one of the image objects sending the descriptors that describe the requested objects

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according to a defined accuracy (Pages 9-10, Sect. 2.2) and sending shape descriptors relevant to the at least one of the image objects that the requester is lacking (Page 8).

Regarding claims 23 and 29, the arguments analogous to those presented above for claim 21 are applicable to claims 23 and 29. Strom ignores the issue of region description (Page 18, para. 2), but discloses that it is known to generate a definition of an outer boundary line of the regions, send the descriptors to the requesting decoder, and decode with the aid of the definition (Page 18, para. 2). Strom discloses that the decoder must either infer the location of the region or must be explicitly told the boundaries of the region.

5. Claims 24 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al. ("Medical Image Compression with Lossless Regions of Interest") and Impagliazzo et al. (5,757,974) as applied to claims 19 and 25 above, and further in view of Hirabayashi (6,256,413).

Regarding claims 24 and 30, Strom ignores the issue of region description (Page 18, para. 2), but discloses that it is known to generate a definition of an outer boundary line of the regions, send the descriptors to the requesting decoder, and decode with the aid of the definition (Page 18, para. 2). Strom discloses that the decoder must either infer the location of the region or must be explicitly told the boundaries of the region. Strom and Impagliazzo do not appear to recognize creating a mask describing the coefficients required to reconstruct different regions in the image. However, Hirabayashi teaches that it is known to create a mask describing the transform coefficients required to reconstruct different regions (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the boundary

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description disclosed by Strom and Impagliazzo to include using a mask as taught by Hirabayashi. The motivation for doing so would have been because it is well known methodology routinely implemented in the art and it provides another way of emphasizing or de-emphasizing information content of the image. Therefore, it would have been obvious to combine Strom and Impagliazzo with Hirabayashi to obtain the invention as specified in claims 24 and 30.

6. Claims 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al. ("Medical Image Compression with Lossless Regions of Interest") and Impagliazzo et al. (5,757,974) as applied to claims 19 and 25 above, and further in view Nishihara et al. (US 4,903,317).

Regarding claims 20 and 26, the arguments analogous to those presented above for claim 19 are applicable to claims 20 and 26. Impagliazzo discloses storing the transformed and compressed image together with header information including pointers to associated segment descriptors and associated subset descriptors (Col. 6, lines 49-67; Col. 7, lines 33-67, Col. 8, lines 1-62), but does not appear to disclose the header information containing pointers associated segment descriptors and subset descriptors. However, Nishihara et al. ("Nishihara") discloses that it is known to provide header information containing pointers to ROI descriptors (Col. 9, lines 11-30). It would have been obvious to one of ordinary skill in the art to have modified the header information disclosed by Strom and Impagliazzo to include pointers associated segment descriptors and subset descriptors. The motivation for doing so would have been because it is well known and routinely utilized in the art. Therefore, it would have been obvious to

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combine Strom and Impagliazzo with Nishihara to obtain the invention as specified in claims 20 and 26.

7. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al. ("Medical Image Compression with Lossless Regions of Interest"), Impagliazzo et al. (5,757,974), Hirabayashi (US 6,256,413), and in further view of Nishihara et al. (US 4,903,317).

Regarding claim 31, the arguments analogous to those presented above for claims 20, 21, and 24 are applicable to claim 31.

Regarding claims 32 and 33, the arguments analogous to those presented above for claims 20 and 22 are applicable to claims 32 and 33.

Other Prior Art Cited

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,272,253 to Bannon et al. for content-based video compression; and

U.S. Pat. No. 6,259,819 to Andrew et al. for efficient method of image compression comprising a low resolution image in the bit stream.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-

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4072. The examiner can normally be reached on Mon-Thurs 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Virginia Kibler can be reached on (703) 306-4072. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Virginia Kibler

Virginia Kibler
11/24/04

MEHRDAD DASTOURI
PRIMARY EXAMINER

Mehrdad Dastouri